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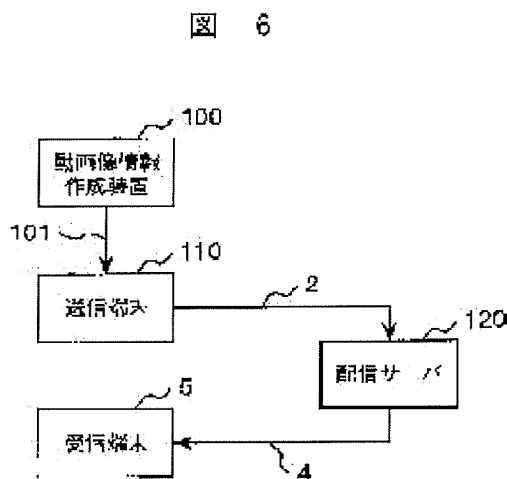
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(54) IMAGE INFORMATION FORMING APPARATUS, VIDEO COMMUNICATION TERMINAL, IMAGE DISTRIBUTION SERVER AND IMAGE INFORMATION SERVICE SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To solve the problem of conventional multimedia that have communication terminals to have an image input camera 21 and an image encoder 23 mounted, in order to form image information codes, so that cost and electric power are increased and the life time of a battery for driving a transmission terminal 5 is shortened, and the size of the terminal is increased and portability is deteriorated, when a battery of large capacity is mounted.

SOLUTION: Image input function and encoding process function are isolated from the transmission terminal and installed as a dynamic image information forming apparatus. Image or information of image and sound formed by the forming apparatus is fetched in the transmission terminal, or transmitted to a receiving terminal, after being stored by a server.



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CLAIMS

[Claim(s)]

[Claim 1]A picture information preparation device comprising:

A payment part.

An image pick-up machine which operates considering a fee having been paid as conditions and creates picture information.

A treating part which adds and outputs the number of times which is decided according to a paid fee, and which can be copied to picture information created by said image pick-up machine.

[Claim 2]A picture information preparation device comprising:

A means to create picture information on condition that it became certain that a fee is paid or paid.

A means to add restricted frequency which is decided with a fee paid and which can be copied to said picture information, and to output it.

[Claim 3]A picture information preparation device comprising:

A communication interface section to which external terminal equipment is connected.

A payment part.

An imaging means which answers that photographing start instruction occurred, carries out fixed time photography from a user on condition that said payment part had payment, and outputs dynamic image information.

A means to make said dynamic image information which answered that there were directions and added the number of times according to a frame of said payment which can be copied incorporate into said external terminal equipment from a user via said interface part when video displayed as a means to display picturized dynamic image information may be sufficient.

[Claim 4]The picture preparation device according to claim 3 provided with a means to display the number of times of information on video which can be copied, and a fee corresponding to it.

[Claim 5]The picture information preparation device comprising according to claim 3:

A means to choose background information.

A means which carries out picture composition of selected background information and said dynamic image information.

[Claim 6]The picture information preparation device according to claim 3 acquiring speech information with said imaging means, and making it incorporate into said external device with said dynamic image information [Claim 7]A picture information preparation device comprising:

A photographing device which answers that photographing start instruction occurred, carries out fixed time photography from a user on condition that it is trustworthy that there having been payment or fee collection is made, and outputs dynamic image information.

A means to create ID information which specifies said video to said video.

A means to transmit said ID information to a terminal unit, and to transmit said ID information and said dynamic image information to a server.

[Claim 8]The picture information preparation device according to claim 7, wherein said ID information is provided with information on the number of times according to the collected amount of money which can be copied.

[Claim 9]A picture information preparation device comprising:

A communication interface section to which a server is connected.

A payment part.

An imaging means which answers that photographing start instruction occurred, carries out fixed time photography from a user on condition that said payment part had payment, and outputs dynamic image information.

A means to transmit said dynamic image information which answered that there were directions and added the number of times according to a frame of said payment which can be copied to said server via said interface part from a user if video displayed as a means to display picturized dynamic image information may be sufficient.

[Claim 10]A communication terminal device comprising:

Memory storage which memorizes picture information transmitted from the outside.

A storage parts store which stores the number of times of said picture information transmitted from the outside which can be copied.

A transfer means which transmits picture information memorized by said memory storage.

A control means which deters said transmission when transmission of said picture information by said transfer means is permitted and said transfer frequency turns into said number of times which can be copied until transfer frequency turns into said number of times which can be copied.

[Claim 11]A communication terminal device comprising:

A copy frequency control section which receives picture information to which the number of times which can be copied was added, extracts the number of times which can be copied from said picture information, and manages copy frequency.

A control section which controls transmission of said picture information from a communication interface according to the number of times which can be copied having been set to 0.

[Claim 12]A communication terminal device comprising:

A means to receive and save ID information which specifies dynamic image information which is created and is stored in memory storage of a server.

A means to create destination information.

A means to make dynamic image information which transmits said ID information and said destination information to said server, and is specified as said server by said address by said ID distribute.

[Claim 13]An image distribution server comprising:

Created dynamic image information.

A means to receive and memorize the 1st ID that specifies the video concerned.

A means to search memorized dynamic image information whose the 1st ID and 2nd ID correspond if a Request to Send provided with the 2nd ID for specifying destination information and the video concerned is received from a communication terminal, and to distribute applicable dynamic image information to said address.

[Claim 14]An image distribution server of claim 13, wherein said ID is provided with the Management Department which will deter transmission of the dynamic image information concerned if the number of times which updated the number of times which can be copied and remained for every distribution, and which can be copied is set to 0 including frequency information which can be copied.

[Claim 15]An image information providing system provided with the 1st communication terminal device and a distributing server which distributes dynamic image information transmitted from said 1st communication terminal device to the 2nd communication terminal device of said specified address characterized by comprising the following.

A means to create picture information on condition that it became certain that a fee is paid or paid.

A picture information preparation device provided with a means to add restricted frequency which is decided with a fee paid and which can be copied to said picture information, and to output it.

Memory storage which memorizes picture information transmitted from said picture information preparation device.

A storage parts store which stores the number of times of said picture information transmitted from said picture information preparation device which can be copied, A control means which deters said transmission when transmission of said picture information by said transfer means is permitted and said transfer frequency turns into said number of

times which can be copied until a transfer means which specifies an address and transmits picture information memorized by said memory storage, and transfer frequency turn into said number of times which can be copied.

[Claim 16]Have the 1st communication terminal device characterized by comprising the following, and also said image distribution server compares with ID information received from said picture information preparation device when ID information and an address were received from said 1st communication terminal device, An image information providing system provided with a means to search memorized dynamic image information in agreement, and to distribute applicable dynamic image information to the 2nd communication terminal device shown by said address.

A means to create dynamic image information on condition that it became certain that a fee is paid or paid.

A picture information preparation device provided with a means to add restricted frequency which is decided with a fee paid and which can be copied to said dynamic image information, and to output it, and a means to output ID information which specifies said video.

An image distribution server which receives and memorizes ID which specifies said created dynamic image information and the dynamic image information concerned.

A means to receive ID information which specifies dynamic image information memorized by said server, and to save, a means to create destination information, and a means to require distribution of the transmission sushi aforementioned dynamic image information of said server for said ID information and said destination information.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the portable computer terminal for multimedia services which transmits and receives the video and speech information which were inputted from the dynamic-image-information preparation device which creates video and speech information, and the dynamic-image-information preparation device, and dynamic-image-information creation and a distribution system.

[0002]

[Description of the Prior Art] By using International Standard ISO/IEC14496 (MPEG-4) etc., sound information, such as video and a sound, or a music signal, can be compressed and transmitted to tens kbit(s)/a second (it carries out abbreviated to bps below) grade. The code data obtained by compressing the video voice signal of fixed time using MPEG-4 can be set by electronic mail data (text information) as one or two files of an image and a sound, and it can transmit. The image and voice file send action between the computer terminals for multimedia services which attach an image and a voice file to electronic mail data, and transmit and receive it to drawing 1 are explained.

[0003] Drawing 1 is a figure showing transmission and reception of an image and a voice file by the conventional computer terminal for multimedia services. The transmit terminal 1 compresses the inputted image and sound, and transmits it to the distributing server (or mail server) 3 via the transmission line 2. The distributing server 3 decodes the address of data which received, and forwards e-mail to the receiving terminal 5 applicable to an address via the transmission line 4. Or when it supervises that the receiving terminal 5 connects the distributing server 3 to the distributing server 3 and checks having connected, the purport that e-mail has arrived at the terminal 5 via the transmission line 4, or the e-mail itself is forwarded to the receiving terminal 5.

[0004] Drawing 2 is a detail view of the transmit terminal 1 of drawing 1. In the transmit terminal 1, the character input information (for example, depression key information) 12, the video signal 22, and the audio signal 32 are inputted from the character input device 11, the camera 21, and the microphone 31, respectively. The character input information 12 is decoded with the editing device 13, and is stored in the field which serves as the character code 14 and stores the text information of the memory 15. The character codes 14 may be edit codes (insertion, deletion, pointer movement, etc.). The video signal 22 is changed into the image numerals 24 according to the method which was inputted into the video encoder 23, for example, was defined in MPEG-4. The generated image numerals 24 are stored in the memory 15. With the voice encoder 33, according to the method defined for example, in MPEG-4, the audio signal 32 is changed into the audio code 34, and is stored in the memory 15. With a transmit-terminal user's directions, first, the transmit terminal 1 calls the distributing server 3, and establishes the transmission line 2. Next, the text information, the image (address [of e-mail], the text, etc.) numerals, and the audio code which were stored in the memory 15 are read from a memory, and it transmits to a server via communication

IF17 and the transmission line 2.

[0005]Drawing 3 is a mimetic diagram showing the situation of transmit information on the transmission line 2. Transmit information is previously transmitted from the information on the left of a figure. The address 50 is transmitted first, and the text information 51, the speech information 52, and the video information 53 are transmitted continuously. Although it is also possible not to transmit since speech information can be substituted for text information, in the following explanation, text information and speech information explain as a transmitting [both sides]-to receiver premise.

[0006]Drawing 4 is a detail view of the distributing server 3. Operation of the distributing server 3 comprises two phases. The 1st phase is reception of the data (following mail data) from the transmit terminal 1, and stores in the buffer 45 the information 42 inputted via communication IF41 from the transmission line 2. At this time, the record for charging the fee according to the amount of information or hour corresponding, and time communication which the distributing server received in the charging control circuit 43 if needed to a sending person is taken. The 2nd phase is started from the arbitrary time after the 1st phase is completed. In the 2nd phase, the communication control circuit 47 reads the mail data 46 stored in the buffer, and the address is decoded. And it directs to communication IF49 and the receiving terminal 5 is called at the terminal applicable to an address, i.e., this example. When the transmission line 4 with the receiving terminal 5 is established, the text information of the mail information stored in the buffer 45, speech information, and video information are read, and mail data is transmitted to the receiving terminal 5 via communication IF49 and the transmission line 4.

[0007]Drawing 5 is a detail view of the receiving terminal 5. In the receiving terminal 5, if the call from the distributing server 3 is received, the transmission line 4 will be established between the distributing servers 5 by communication IF60. And the mail information transmitted from the distributing server 3 is stored in the memory 62 via communication IF60. The information stored in the memory 62 at this time is text information, an audio code, and image numerals. By the control circuits 79 (for example, key input operations etc.), the user of the receiving terminal 5 chooses the received mail information, via the text display processing 64, can display the text information 63 on the display device 66, and can read it. The image numerals 71 and the audio code 75 can be read if needed, the video signal 73 and the audio signal 77 can be reproduced by the video decoder 72 and the audio decoder 76, respectively, and it can also output by an image's passing the display device 66 and a sound passing the loudspeaker 78.

[0008]When recording video on JP,11-284973,A using a personal digital assistant with a small memory, although the art of transmitting and memorizing data to a host via a means of communication is indicated, this is considered as the above-mentioned modification. That is, the fundamental composition of a transmit terminal does not change. Setting out of the number of times of copy permission is not described at all.

[0009]

[Problem(s) to be Solved by the Invention]In the conventional multimedia communication terminal described above. In order to generate video information numerals, it is necessary to mount the image input camera 21 and the video encoder 23. Cost becomes expensive, and also since much electric power is needed, the life of the cell which drives the transmit terminal 1 becomes short, by carrying a more nearly mass cell, the size of a terminal becomes large and portability is spoiled.

[0010]

[Means for Solving the Problem]An aforementioned problem is solvable by dissociating from a transmit terminal and installing a function picturized and coded.

[0011]

[Embodiment of the Invention]Hereafter, the 1st example of this invention is described using drawing 6. The user who wants to transmit video and voice data connects his transmit terminal 110 to the dynamic-image-information preparation device 100. The dynamic-image-information preparation device 100 takes in the sound which accompanies video and it, and transmits it to the transmit terminal 110 as an image and the audio code 101. A user accumulates an image and the audio code 101 in the transmit terminal 110, and after he adds destination information and text (e-mail) information to it, he transmits data to the distributing server 120. A cellular-phone machine, portable PC, etc. are assumed as a transmitting terminal device. The address which received in the distributing server is decoded and the text information which attached video audio information to the receiving terminal 5 applicable to an address is transmitted.

[0012]Although the transmit terminal and the receiving terminal are called to the expedient upper functional order of explanation here, these may be the terminals having the function of transmission and reception. Therefore, even if it calls it a transmit terminal, it does not mean that it does not have a receiving function. Similarly, even if it calls it a receiving terminal, it does not mean that it does not have a transmitting function. The terminal dealing with a picture names generically a transmission exclusive terminal, a receive only terminal, and a terminal with a transmitting function, and calls them a pictorial communication terminal.

[0013]Drawing 7 is a detail view of the dynamic-image-information preparation device 100 of drawing 6. A photograph is taken with the camera which is a photographing instrument, and like the transmit terminal 1, it is coded and the image inputted from the camera concerned and the sound inputted from the microphone are stored in the memory 130 as the image numerals 24 and the audio code 34, respectively. Respectively it is decoded by the video decoder 141 and the audio decoder 145 as the numerals 140 and the numerals 144, and is reproduced by the display device 143 and the loudspeaker 147, and these numerals 24 and 34 can check the contents. If it is checked that the fee defined by the payment part 136 to the dynamic-image-information preparation device at this time is paid, or payment is made certainly, the fee collection control section 135, It notifies to the copy frequency control section 137 via the copy frequency information 136 on the image

numerals 24 and the audio code 34. if the relation between a fee and copy frequency becomes 300 yen, for example -- the 5 times copy possibility of -- if 500 yen becomes -- the 10 times copy possibility of and ** -- you may set beforehand like. Only one kind of fee. The copy frequency set part 137 reads the image numerals 24 and the audio code 34 from the signal wire 38 from the memory 130, Previous copy frequency information is written in the number-of-times field where it was beforehand set in numerals and which can be copied, and an image and the audio code 139 with copy frequency limit information are again returned to the memory 130. After that, the image and the audio code 101 with copy frequency limit information are read from the memory 130, and is transmitted to the transmit terminal 110 via communication IF132. The control section 35 answers operation used as the trigger of the image pick-up and sound recording by the user of the dynamic-image-information preparation device 100, points to the start of the operation to the encoders 23 and 33, and directs the end of the operation after fixed time (for example, after 5 to 20 seconds). The control section 35 answers a user's operation, operates the decoder 141,145, and makes reproduction of a picture and a sound perform. The control section 35 answers a user's operation, starts communication IF132, and makes an image and the audio code 101 with copy frequency limit information transmit to the transmit terminal 110. [0014]Here, drawing 8 explains an example of the flow of operation with a dynamic-image-information preparation device. This shows one of the flows of the typical operation including a part of modification described later. The introduction user connects to communication IF132 the personal digital assistant which hits a transmit terminal (2001). It is checked whether communication IF132 can transmit information to the personal digital assistant (2002). Next, the number of times which can be copied, and the amount of money corresponding to it are displayed on the memory 130 by control of the information and the control section 35 which were memorized beforehand (2003). This may always be displayed from before connection of a personal digital assistant. a user is touching a screen with desired copy frequency -- it is -- it chooses by pressing a key (2004). And the money of the shown amount of money is put into the payment part 36 (2005). Then, the screen of a display device changes to the selection picture of a background image. A user chooses the desired background, seeing this (2006). The selected background image is displayed on the screen of a display device (2007). I hope that there is not necessarily a display of a background image. At this time, it goes into the step of photography immediately. If it judges that another background image is good, it will return to Step 2006. If a user judges that this may be sufficient, a photographing start, such as pushing the button of a photographing start, will be directed. For example, a user's figure and message are recorded here. Thus, photography is started (2009).

[0015]Photography will be stopped if fixed time photography is made (2010). The video photoed after that is displayed and it is made to judge whether a photograph has been taken so that a user might wish. If it is judged that it did not go well and that is inputted, it will return to Step 2009. If there is an input of O.K., the information on the number of times

which was decided by payment and which can be copied, the coded video, and a sound will be created (2013). And this is incorporated into a personal digital assistant through communication IF132 (2014).

[0016]Although not touched here, the music used as a background may be passed simultaneously with photography.

[0017]Drawing 9 is a detail view of the transmit terminal 110. In the transmit terminal 110, the image with copy frequency limit information and audio code received by the transmission-line 101 and communication IF150 course from the dynamic-image-information preparation device 100 are stored in the memory 15. In front of this processing or in the back, the text information 14 is stored in the memory 15 by the character input device 11 and the editorial department 13. When transmitting the text information 14, and an image and an audio code 101 to a receiving terminal, First, the copy frequency control section 152 reads the number-of-times field in an image with copy frequency limit information, and image numerals which can be copied, and the number of times which can be copied is counted, and when the number of times which can be copied is one or more, this value is reduced one and it returns to the number-of-times field in the memory 15 which can be copied. Copy frequency limited image numerals are copied in the memory 15, and the transmission video data which set the number-of-times field which can be copied as the information showing "a copy is improper" is prepared. After these work is completed, destination information, text data, transmission video image code data, and sound code data are transmitted to a distributing server via communication IF17.

[0018]In the above-mentioned processing, the control section 37 performs the following control. Reception of data is checked about communication IF150 and storing in the memory 15 is directed. About copy frequency control-section 152 and communication IF17, the remaining number of times that can be copied is asked to the copy frequency control section 152, and the remaining number of times that can be copied is obtained. and when the remaining number of times that can be copied does not come out zero, communication IF is allowed transmission, and if the remaining number of times that can be copied is 0, communication of communication IF will be deterred.

[0019]Drawing 10 is a figure explaining the example of copy frequency control in drawing 7 and drawing 9. The top is a situation of the numerals immediately after writing the numerals outputted from the video encoder 23 and the voice encoder 33 of drawing 7 in the memory 130. The audio code 53 and the image numerals 52 multiplex, and are made into a sound and the image numerals 500, and the field 501 which shows the number of times which can be copied to the header unit is prepared. At this time, the number of times which can be copied is unfixed. The value defined beforehand may be set up instead of being unfixed. If copy frequency is determined by payment check, the value (the example of drawing 10 5 times) according to the amount of payment will be written in the number-of-times field which can be copied, and a sound and the image numerals 500 will be again returned to the memory 130, as it is read from a memory and shown in a sound and the image numerals

501. If the number of times which the value of the number-of-times field which can be copied can copy the stream to which a transmit terminal corresponds, and can transmit is shown and this value is set to 0, reproduction will be possible on the same terminal, but it becomes impossible to transmit corresponding data to another terminal. Then, a sound and the image numerals 501 are transmitted to the transmit terminal 110, and are stored in the memory 15. From the transmit terminal 110, when transmitting a sound and image numerals to the receiving terminal 5, As the sound and image numerals stored in the memory 15 are shown in a sound and the data numerals 502, the number of times 507 which can be copied is reduced by 4, and the number of times 508 of the copied sound and the image numerals 504 which can be copied is further set to 0 (a copy is impossible). The field for verification asked for the value of the number-of-times field which can be copied at a meaning from the field of the number of times which can actually be copied, and the number of times which can actually be copied at this time. If it constitutes from (for example, a parity bit) and these are enciphered, the alteration of the inaccurate number of times which can be copied can be prevented more from being made. That is, a tester decodes the applicable field, and if the value for verification calculated from the actual number of times which can be copied is in agreement with the value of the field for verification, it will be confirmed that there was no alteration. The tester may be installed in any in a transmit terminal, a receiving terminal, and a distributing server.

[0020]Drawing 11 is the 2nd example of this invention. A different portion from the 1st example is a point stored in the storage device 123 which a sound and image numerals were transmitted to the distributing server 160 via the signal wire 102 rather than was transmitted to a transmit terminal, and was connected to the distributing server 163. The transmit terminal 161 receives only ID of a sound and image numerals from the dynamic-image-information preparation device 160. When the transmit terminal 161 transmits a sound and image numerals to the receiving terminal 5, as shown in drawing 12, a sound and image numerals ID165 are added to the address 50 and the text (e-mail) information 51, and it transmits to the distributing server 163. The sound and image numerals applicable to a sound and image numerals ID165 are searched with the distributing server 163 from the storage device 123, the address 50 and the text information 51 are given, and it transmits to the receiving terminal 5.

[0021]The detail view of the dynamic-image-information preparation device 160 is shown in drawing 13. The portions of encoding of the portion on the left of the memory 130 of a figure, i.e., an image, and a sound and decoding are the same as that of the dynamic-image-information preparation device 100 of drawing 7. The generated sound and image numerals are stored in the memory 130. At this time, the number-of-times field in particular that was shown in drawing 10 and that can be copied may not be. In ID issuing part 170, unique ID172 is generated to the sound and image numerals stored in the memory. . And collected from the user who generated a sound and image numerals in the fee collection control section 135 to the payment part 36. Or according to the frame of a positive fee,

collection sets up the number of times 136 which can be copied, carries out multiplex to a sound and image numerals ID172 in communication IF132, and is transmitted to a distributing server as sound and image numerals ID103. Simultaneously with this, a sound and the image numerals 131 are also read from a memory, and are transmitted to a distributing server as a sound and the image numerals 102. On the other hand, multiplex [of a sound and image numerals ID172, and the number of times 136 that can be copied] is carried out in communication IF173, and it is transmitted to the transmit terminal 161 as sound and image numerals ID101.

[0022]The flow chart of the outline of the example of operation seen from the device side of a dynamic-image-information preparation device is shown in drawing 14. In the initial state, the dynamic-image-information preparation device displays the clinch picture etc. of the picture captured into the display device 143 from demonstration video or the camera 21 (processing 230). At this time, it waits to judge whether the predetermined fee was always paid by the user by the fee collection control section 135 (processing 231), and to pay a predetermined fee. After a predetermined fee is paid, it shifts to the processing 232, a photographic subject is photoed with the camera 21, and an image and an audio code are generated (processing 233). Then, it is checked whether the image photoed to the user is actually purchased (processing 234). When it shifts to the processing 235 when purchase is checked, and it cannot check, it returns to the processing 232 and photography is performed again. As a communication line is set to generation and the distributing server 163 (processing 236) and a sound and image numerals ID172 were explained above to the distributing server 163 by the processing 235, Sound and image numerals ID172, and a sound and image numerals 131 are transmitted (processing 237,238), and communication with the distributing server 163 is cut. Next, to the communication terminal 161, communication is started and the signal 101 which merged sound and image numerals ID172 and copy restricted frequency is transmitted.

[0023]Drawing 15 is a detail view of the distributing server 163. Operation of the distributing server 163 is mainly divided into two phases. The 1st phase is communication with the dynamic-image-information preparation device 160, and the 2nd phase is communication with the transmit terminal 161. The 1st phase to one a sound and image numerals may certainly be performed in advance of the 2nd phase, and the 2nd phase may be repeated two or more times.

[0024]In the 1st phase, a sound and image numerals ID103, and a sound and image numerals 102 are received from the dynamic-image-information preparation device 160 via communication IF200. The sound and image numerals ID103 which received are transmitted to a sound and the image numerals ID management department 205. In a sound and the image numerals ID management department 205, a sound and image numerals ID to ID and the number of times which can be copied which received are extracted first, and it stores in the predetermined part in the memory storage 206. This is accompanied and the position information which stores a sound and image numerals within

the storage device 123 is generated, and it relates and stores in applicable ID in the memory storage 206. The storing position information of a sound and image numerals is notified to the storage device 123 as the storing position information 121, and the inputted sound and the image numerals 102 are simultaneously outputted to the signal wire 122 via the signal wire 201 and the selector 202. In the storage device 123, the sound and image numerals on the signal wire 122 are stored in the position which the storing position information 121 shows.

[0025]Before shifting to explanation of the 2nd phase, the example of the data structure of the management table of the sound and image numerals ID stored in the memory storage 206 is shown in drawing 16. The inside of the memory storage 206 has list structure like drawing 16, and the number of times 601 which can be copied, and a sound and an image numerals preserving position 602 are recorded for every sound and image numerals ID600. The data volume of the memory storage 206 can be prevented from increasing infinitely by doubling and recording the preservation term 603 of ID. For example, as shown in the line 605 in the case of numerals ID0, 5 more times, a copy is possible, data is stored in the 1000th street, and preservation terms are 00/06/20. When the number of times which can be copied is set to 0 like numerals IF3 of the line 608, transmission of a sound and image numerals becomes impossible. If the sound and the image numerals ID management department 205 have managed the number of times of the management table in the memory storage 206 which can be copied and transmits once, it will reduce one, and if set to 0, this will control the gate 215 and will forbid transmission.

[0026]It returns to explanation of the distributing server 163 of operation, and a sound and image numerals ID211, and an address and the text information 212 are transmitted via communication IF210 in the 2nd phase of operation of the distributing server 163 from the transmit terminal 161. A sound and image numerals ID211 are inputted into the ID management department 205. ID searches a match with the ID management department 205 to a sound and image numerals ID205, and the position information in which its sound and image numerals are stored is acquired from the information stored in the memory storage 206 in it. And to the storage device 123, the storing position information 121 is outputted and the sound and image numerals in the storage device 123 are read. The read sound and image numerals turn into a sound and the image numerals 213 via the selector 202, and are transmitted to the receiving terminal 5 with the text information 212 via communication IF214.

[0027]The detail view of the transmit terminal 161 is shown in drawing 17. Operation of the transmit terminal 161 is divided into three phases. In the 1st phase, the sound and image numerals ID102 from the dynamic-image-information preparation device 160 are received, and it saves in the memory 15. The address and text information which were generated in the 3rd phase that generates the information which shows the existence of an address, text information, a sound, and image numerals ID addition by the character input device 11 and the editorial department 13 in the 2nd phase, It receives in the phase 1 and the sound and

image numerals ID stored in the memory 15 are transmitted to the distributing server 163 via communication IF17. The 1st phase to one a sound and image numerals may certainly be performed in advance of the 2nd and 3rd phase, and the 2nd phase may be performed in advance of the 3rd phase, and the 2nd phase may be repeated two or more times.

[0028]Drawing 18 is a modification of the image encoding portion 200 of the dynamic-image-information preparation device 160 of ****13. In drawing 18, a user chooses the one background video 222 from the image 22 photoed with the camera 21, and the background video 221 accumulated beforehand, these are compounded by the image compositing section 223, the new synthetic video 224 is generated and encoded, and the image numerals 24 are generated. A blue wall etc. can be installed in the background of photography of the photographic subject using the camera 21 for example as the composite technique, and the portion of a color component (in this case, blue) specific at a synchronizer can use the art of a chroma-key using the not the image 22 but background video 222 which the camera photoed.

[0029]Drawing 19 is a modification of the voice encode part 210 of the dynamic-image-information preparation device of drawing 13. It compounds like the case of the image of drawing 18 by the background sound 232 as which the user chose the sound inputted from the microphone 31 from the background sounds 231, and the sound synchronizer 233, the new sound 234 is generated and encoded, and the audio code 34 is generated.

[0030]Drawing 20 is the 2nd modification of the image encoding portion 200 of the dynamic-image-information preparation device 160 of drawing 13. In drawing 20, background parts are removed by the video encoder 240 and, as for the image 22 inputted from the camera 21, the object coding only of the photographic subject is carried out. shapecoding of MPEG-4, etc. can be used as an example of object coding. The image numerals 24 which consist of two objects of a background video and an object image are generated by carrying out multiplex [of the background numerals 242 which coded beforehand to this and generated the background video to it and which the user chose from background numerals] by the multiplexing part 243. In order to decode these numerals, the video decoder 72 of the receiving terminal 5 of drawing 5 needs to have the decoding function of object numerals.

[0031]Drawing 21 is an example for performing composition with a background video and an object image with the distributing server 310. Different points from drawing 11 are the point that the background video selection signal 304 was added, the point that the background video storage device 312 was connected with the distributing server 310, and a point that composition (multiplex) of an object image (image numerals of a sound and the image numerals 102) and the background video numerals 313 is performed by the distributing server 310.

[0032]Drawing 22 is a detail view of the dynamic-image-information preparation device 300 of drawing 21. A different point from the dynamic-image-information preparation device 160 of drawing 13 is a point which a user chooses a background video (background video 302),

and transmits to a distributing server by the background video selecting part 301 by making this selection signal into the background video selection signal 304 at the time of photography.

[0033]Drawing 23 is a detail view of the distributing server 310 of drawing 21. The point that the function in which a different point from the distributing server 120 of drawing 15 receives the background video selection signal 304 was added, Using the received background video selection signal 321, by the background read-out control 322. The point which reads the background video numerals 313 to which the position information 311 on an applicable background video is generated, and it transmits to the background video storage device 312, and corresponds in the background video storage device 312, It is a point which multiplexes the read background video numerals by the multiplex section 323 with the image numerals 123 (it has stored in the storage device 123) of a photographic subject (composition).

[0034]Drawing 24 is an example of the renewal server 400 of the number of times which updates the number of times of the 2nd example which can be copied and which can be copied. Two methods for updating copy frequency by a diagram are shown. The transmit terminal 161 transmits a sound and image numerals ID, and the number that can be copied [additional] in the transmission line 2, and the 1st method is the accounting part 210 in the renewal server 400 of the number of times which can be copied, and is a case where an applicable fee is collected. The 2nd method adds the function to assist the renewal of the number of times which can be copied to the number-of-times addition terminal (it installs for example, in a video preparation device) which can be copied, It is the method of collecting an applicable fee with a video preparation device, and transmitting a sound and image numerals ID, and an additional copy number to the renewal server 400 of the number of times which can be copied via the transmission line 103. In any case, the information on a sound and image numerals ID, and an additional copy number is inputted into ID management 403, and stepping of ID management 403 is carried out only the value specified in the number-of-times value of the applicable sound and numerals ID of the memory storage 206 which stores the table of Drawing 15 which can be copied.

[0035]Drawing 25 is a detail view of the number-of-times addition terminal 450 which can be copied used for the 2nd method of drawing 24. In the number-of-times addition terminal 450 which can be copied, first, it communicates in the transmit terminal 161 and the transmission line 101, and a sound and image numerals ID452 are obtained. In accordance with this, the accounting part 454 collects a fee and the information on a fee is notified to the copy frequency addition part 453. In the copy frequency addition part 453, the additional copy frequency 456 according to a fee is set up, and a sound and this additional copy frequency 456 and image numerals ID452 are notified to the renewal server 400 of the number of times which can be copied via communication IF457 and the transmission line 103.

[0036]The following modifications are also included in this invention.

[0037]In drawing 11 or drawing 21, although the example in which only a sound and image numerals ID101 are transmitted to the transmit terminal 161 was explained from the dynamic-image-information preparation device 160 or 300, a sound and image numerals may be transmitted in order to check the photoed image. In this case, the sound and image numerals transmitted to the communication terminal 161 are arranged and managed by the position which indicates another transmission failures to be the usual file and text information so that it cannot transmit to other terminals.

[0038]Although fee collection is performed for every photography in a dynamic-image-information preparation device in the example of this invention, In [in drawing 11 or drawing 21 transmit charge request information to a distributing server from a dynamic-image-information preparation device, and] a distributing server, It may charge by adding to the phonecall charges of an applicable transmit terminal, the charge of data communications, etc., when fee collection is checked, confirmed information may be returned to a dynamic-image-information preparation device, and a dynamic-image-information preparation device may continue processing like the case where it charges in a dynamic-image-information preparation device, henceforth.

[0039]Although the fee to generation of a sound and image numerals showed the example set up corresponding to copy frequency, it may be set up corresponding to one or such combination of the size of the screen which is combined with this or is inputted the time of photography instead of this, and the data volume of numerals.

[0040]Each example explained on the assumption that data was automatically transmitted to a receiving terminal from a distributing server, but. When it connects from a receiving terminal to a distributing server, the existence of the data addressed to a receiving terminal is asked to a distributing server and there is corresponding data, transmitting data in a receiving terminal is also included in this invention.

[0041]A cable transmission or wireless transfer is also available for neither of the example of this invention of the cases between a transmit terminal, between distributing servers and a distributing server, and a receiving terminal between a dynamic-image-information preparation device, and a transmit terminal and a distributing server. A line switching or packet switching is also available. moreover -- in the 1st and 3 example -- between a distributing server, and sounds and picture composite servers -- a cable and radio -- any may be sufficient. a line switching and packet switching -- any may be sufficient. A distributing server, and a sound and a picture composite server may be the same devices. A sound and image numerals with comparatively much data can be transmitted by low cost at high speed certainly (comparing with radio) by making between a dynamic-image-information preparation device and a transmit terminal and between an image input terminal and a distributing server into a cable transmission. In order not to transmit a sound and image numerals between a dynamic-image-information preparation device and a transmit terminal in the example of drawing 11 and drawing 21, there is little necessity of not necessarily performing a cable transmission, but when it communicates with a cable, it

is effective in giving sense of security to a user by the ability to transmit goods (code data) certainly. The exchange of the data between a dynamic-image-information preparation device and a transmit terminal may not use a communication line. For example, on the storage device and concrete target which can desorb, data may be delivered and received using nonvolatile memory, such as a flash memory and flash memory card, a floppy (registered trademark) disk, MD, CD-R, DVD RAM, etc.

[0042]Although explanation of the example explained that a sound and image numerals, and mail data were stored on the same memory with transmission or a receiving terminal, Since a sound and image numerals have much data volume compared with mail data, they may be stored in the external storages (for example, a removable flash memory, HD, FD, etc.) of a terminal.

[0043]Although explained by a transmit terminal and a receiving terminal dividing those functions, as shown in drawing 26, the transmit terminal which has both functions may be sufficient. In this case, the memory 15 can be made to serve a double purpose. The example which realized the edit function 13 of drawing 26, the video decoder 72, and the audio decoder 76 by software is the sender receiver terminal 1010 of drawing 27. The above-mentioned software processing is performed by CPU1011, and, as for a display image or a printable character, a sound or an audio is outputted via the audio output 1014 via the memory 1013 for a display, respectively. The memory of display memory and the control section 1013 can also be used also [main memory / 1012]. In drawing 27, communication IF17 and communication IF60 are annexed by communication IF17, and it is taken as one block. A cellular phone etc. are raised as an example of the sender receiver terminal 1010 of drawing 27.

[0044]Another modification of drawing 26 is the sender receiver terminal 1020 of drawing 28. External memory IF1021 by which the character input device 11 (for example, a keyboard, a mouse), the display device 66 (for example, monitor), and the loudspeaker 78 are connected to the terminal exterior, and the sender receiver terminal 1020 controls the external storage 1022 and this further is extended. The external storage 1022 comprises a hard disk or a flash memory, and can also store the software of the edit function 13, the video decoder 72, and the audio decoder 76, and the software of communications control and copy frequency control. The storage device which can be desorbed and combination which were explained previously may be sufficient as the external storage 1022, and it may install another external memory IF in the sender receiver terminal 1020 further, and may carry out establishment of both of the device which can be desorbed, and the fixed (hard disk etc. do not carry out usual hot swapping) device. As an example of the communication terminal 1020 of drawing 28, a personal computer, a hand held computer, an electronic notebook, a Personal Digital Assistant, etc. are raised.

[0045]Communication IF (for example, communication IF17) using which [of the example of this invention] case's communication IF (for example, communication IF150) using the signal wire 101, the signal wire 2, the signal wire 4, or both sides can attain

communalization by using the same transmission system.

[0046]The distributing server of drawing 15 can be divided into two portions, the communication processing part 550 of data, and a sound and the image numerals Management Department 551. These two portions may be installed in a physically different place. A communication processing part, and a sound and an image numerals treating part can also be installed independently. That is, the position information not only on numerals ID but a numerals treating part (for example, URL) is stored in a sound and image numerals ID, and a communication processing part transmits this sound and image numerals ID to an addressee as some mails. An addressee decodes the contents of a sound and image numerals ID, anew, accesses a numerals treating part and obtains predetermined numerals. In addition, the storage device 123 and the background video storage device 312 may also be installed in a place physically different, respectively. communication of the data between these -- a cable and radio -- any may be sufficient -- carrying out -- a line switching and packet switching -- any may be sufficient.

[0047]A sound and image numerals ID are effective in preventing the 3rd person from using a sound and image numerals ID unjustly, when it is enciphered, while being transmitted to a distributing server from a distributing server or a transmit terminal, and a transmit terminal from a dynamic-image-information preparation device. If it is communication of 1 to 1 by a cable between transmit terminals, the necessity for a data encryption will disappear from a dynamic-image-information preparation device. When transmitting a sound and image numerals ID to a distributing server from a transmit terminal, dishonesty prevention has an effect by enciphering ID using the encryption key with which only a transmit terminal can know whether the information which combines with a sound and image numerals ID, and can identify a transmit terminal uniquely will be added.

[0048]In any [of the example of this invention] case, you may realize with which technique of hardware, software, or hard soft mixture. It is soft and assumes storing beforehand the program of a portion which controls copy frequency in the transmit terminal 110 in a terminal, for example, when realizing. However, it is also possible to download this software from the server in which the image input terminal 100 to download or another communication is possible. [distributing server / 120 / download or] The premise which is not performed explained copying namely, transmitting the sound and image numerals which received in the receiving terminal 5 in any [of the example of this invention] case to another terminal. In order to realize this, two ones of the following control facilities is needed.

[0049]The 1st example of a control facility is an example which mounts the function which cannot transmit the sound and image numerals which received to the others. In order to realize the 1st example of a control facility, when the sound and image numerals which received are stored, it is necessary to distinguish from the file in which other transmission is possible, and data by setting a special flag or processing saving to a special field etc.

[0050]The 2nd example of a control facility is an example which mounts the same number-

of-times control as a transmit terminal that can be copied in a receiving terminal. In the example of drawing 10, as shown in the numerals 503, since the number of times of the sound and image numerals which received which can be copied is set to 0, if it mounts the same number-of-times control as a transmit terminal that can be copied, it will be in a state [that the received code cannot copy not performing special processing, either]. When the 2nd control facility is mounted, the function in which a sending person specifies copy frequency to an addressee can be realized. That is, when a transmit terminal transmits a sound and image numerals, and one or more values (for example, 2) are written in the field of the number of times which can be copied and it transmits to it, an addressee becomes possible [transmitting a received code to the value (for example, 2 times)]. In this case, the number of times after transmission by the side of a transmit terminal which can be copied becomes the value which subtracted the value of the value plus 1 entered in the field of the number of times which can be copied from the value before transmission (in the above-mentioned example, 3 is subtracted from the value before transmission).

[0051]That by which a sound and image numerals were received as for the copy frequency addition terminal 450 of drawing 25, That is, it connects with a dynamic-image-information preparation device, and this demand can be refused when the demand of a copy frequency addition is received from the terminal (originating terminal) which received a sound and image numerals, or a sound and image numerals ID, and a different terminal. For the purpose, a terminal transmits ID peculiar to a terminal at the time of connection of a copy frequency addition terminal, And after embedding ID of an originating terminal to a sound and image numerals, and the copy frequency addition terminal's 450 comparing ID of a splicing terminal, and terminal ID in a sound and image numerals and checking the same thing, it is realizable if copy frequency adding processing is performed.

[0052]By writing in the value beforehand provided in the number-of-times field of a sound and image numerals which can be copied can show that the number-of-times copy of arbitrary is possible. For example, as a value defined beforehand, -1 or the maximum which can be expressed in the field is raised.

[0053]It explained on the assumption that a communication terminal added a sound and image numerals to text information and transmitted them in the example of this invention, but text information may transmit only the destination information of a transmission destination, and a sound and image numerals (or numerals ID) rather than is [namely,] necessarily required. It is also possible to input, code and transmit a music signal with a larger frequency band (audio signal) instead of a sound. It is included by this invention also when using a still picture instead of an image. In addition, it is contained in this invention also when using the text information of a still picture, an image, a sound, and an audio combined and included. In this case, the number of times which can be copied will show the number of times of text information which can be copied, and is entered in the predetermined field within text information.

[0054]The information on the number of times which can be copied may be independently

set up to each media of an image, a still picture, a sound, an audio, and a text, respectively. In this case, to unify and transmit these media (copy), it is necessary to check the minimum of each number of times which can be copied, and to check whether it can copy or not. After transmission needs to reduce the number of times of all the media which can be copied one.

[0055]By this invention, on condition that the fee was paid, the image pick-up machine was operated, and it explained as adding the number of times according to the paid fee which can be copied to the picture information copied with this image pick-up machine. However, a fee may be replaced and an image pick-up machine may be operated. For example, presentation of the advertisement to a user is not cared about as conditions. In this case, it is possible to add the number of times according to the number of the shown advertisement, length, and the contents which can be copied to picture information. In addition, making a user play a game and operating an image pick-up machine according to the result of the game is also considered. In this case, it is possible to add the number of times according to the score of the game which can be copied to picture information.

[0056]In any [of the example of this invention] case, it explained by defining the word "copy" as transmitting to another terminal using a means of communication (transmission), but the copy processing of the data inside the same terminal may be included. That is, it is included by this invention also when the operation which writes the sound and image numerals which were inputted by the communication IF150 course from the dynamic-image-information preparation device, and were stored in the memory 1012, for example in drawing 28 in the external memory 1022 is defined as a "copy." When the number of times of the inputted numerals which can be copied is 5 times and the example in this case performs a copy to the external memory 1022 once, the number of times of the numerals written in the external memory 1022 which can be copied is an example which sets to 0 and sets simultaneously the number of times of the numerals on the memory 1012 which can be copied as 4 at the time of a copy.

[0057]

[Effect of the Invention]Thus, by separating an image input function from a transmit terminal, the throughput of a transmit terminal is reduced, and miniaturization of a terminal and reinforcement of a terminal cell can be realized, and also highly efficient service of background composition etc. can be provided easily.

[Translation done.]

* NOTICES *

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- 3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]The lineblock diagram of the conventional multimedia data communications.

[Drawing 2]The lineblock diagram of the transmit terminal of drawing 1.

[Drawing 3]The mimetic diagram of the send data of drawing 1.

[Drawing 4]The lineblock diagram of the distributing server of drawing 1.

[Drawing 5]The lineblock diagram of the receiving terminal of drawing 1.

[Drawing 6]The lineblock diagram of the multimedia data communications by this invention.

[Drawing 7]The lineblock diagram of the image input terminal of drawing 6.

[Drawing 8]The figure showing the flow of operation with a dynamic-image-information preparation device.

[Drawing 9]The lineblock diagram of the transmit terminal of drawing 6.

[Drawing 10]The mimetic diagram of a sound and image code data.

[Drawing 11]The figure showing the 2nd example of the multimedia data communications of this invention.

[Drawing 12]The mimetic diagram of the output codes of the transmit terminal of drawing 11.

[Drawing 13]The lineblock diagram of the image input terminal of drawing 11.

[Drawing 14]The flow chart of processing of the image input terminal of drawing 11.

[Drawing 15]The lineblock diagram of the distributing server of drawing 11.

[Drawing 16]The figure showing the example of the data structure in the memory storage of drawing 15.

[Drawing 17]The lineblock diagram of the transmit terminal of drawing 11.

[Drawing 18]The lineblock diagram of the background composition in an image input terminal.

[Drawing 19]The lineblock diagram of the voice synthesis in an image input terminal.

[Drawing 20]The lineblock diagram of the modification of the background composition in an image input terminal.

[Drawing 21]The lineblock diagram of the picture composite in a distributing server.

[Drawing 22]The lineblock diagram of the image input terminal of drawing 21.

[Drawing 23]The lineblock diagram of the distributing server which has a picture composite function of drawing 21.

[Drawing 24]The lineblock diagram of the renewal server of the number of times which can be copied.

[Drawing 25]The lineblock diagram of the number-of-times addition terminal which can be copied.

[Drawing 26]The figure showing the terminal which has a function of the transmit terminal of drawing 9, and the receiving terminal of drawing 5.

[Drawing 27]The figure showing the 1st modification of the sender receiver terminal of drawing 26.

[Drawing 28]The figure showing the 2nd modification of the sender receiver terminal of drawing 26.

[Description of Notations]

A transmit terminal and 3 for 1 a distributing server and 5 a receiving terminal and 100 A dynamic-image-information preparation device, A sound and image numerals, and 110 for 101 a transmit terminal and 101 a sound and image numerals ID, and 102 A sound and image numerals, The renewal server of the number of times which can be copied, and 450 are the number-of-times addition terminals which can be copied the distributing server with which 123 has a sound and an image storage device, 206 has a management table of a sound and image numerals ID, and 310 has a picture composite function, and 400.

[Translation done.]

* NOTICES *

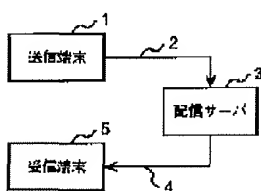
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- 3.In the drawings, any words are not translated.

DRAWINGS

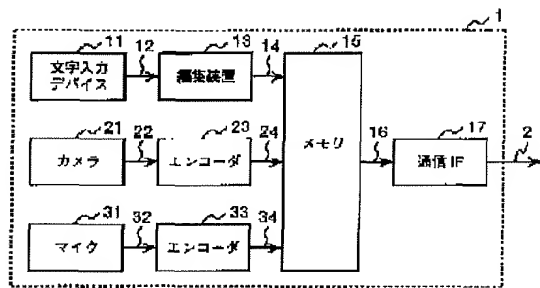
[Drawing 1]

図 1



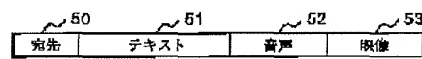
[Drawing 2]

図 2



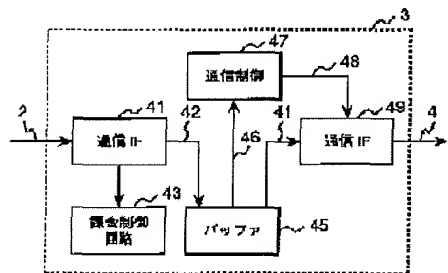
[Drawing 3]

図 3



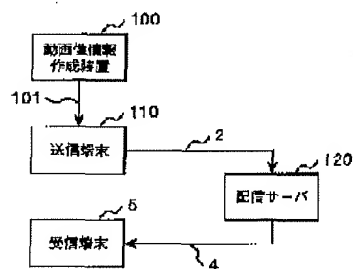
[Drawing 4]

図 4



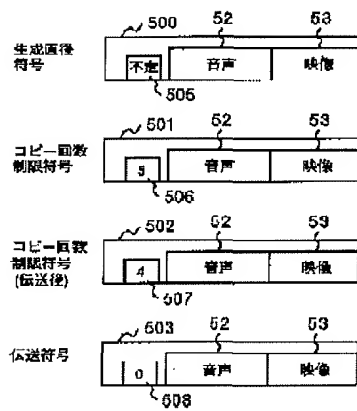
[Drawing 6]

図 6



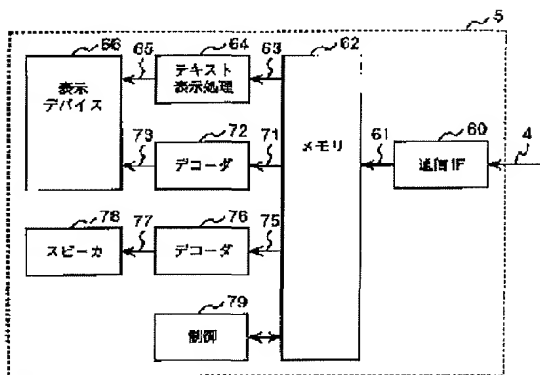
[Drawing 10]

図 10



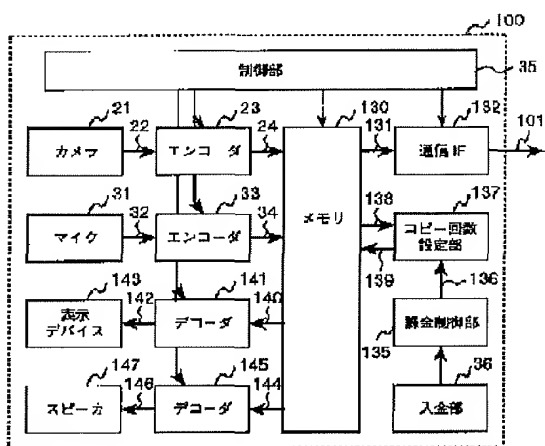
[Drawing 5]

図 5



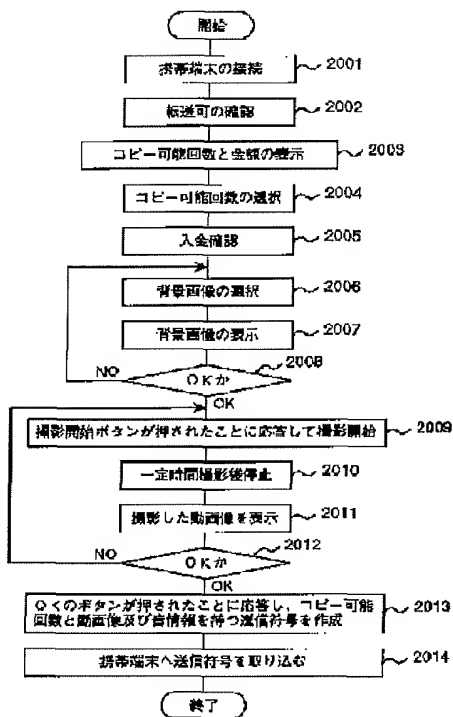
[Drawing 7]

図 7



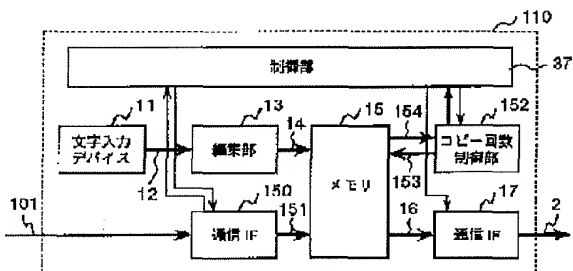
[Drawing 8]

88



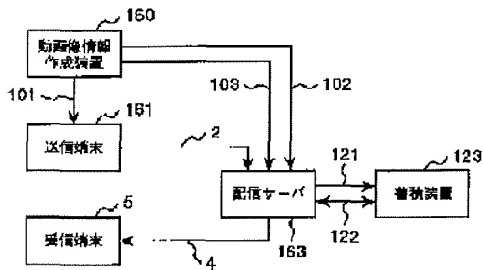
[Drawing 9]

IX 9



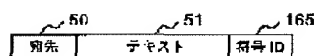
[Drawing 11]

11



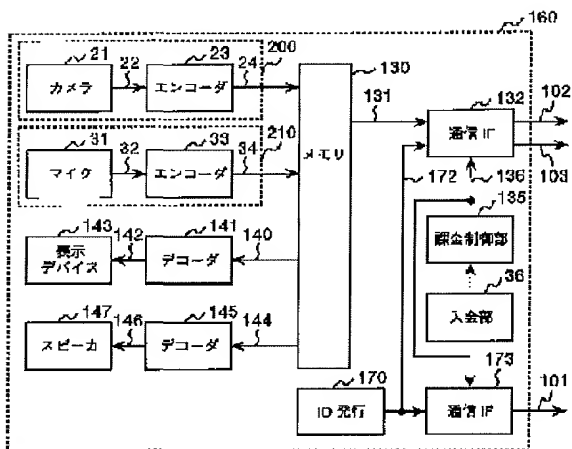
[Drawing 12]

図 12



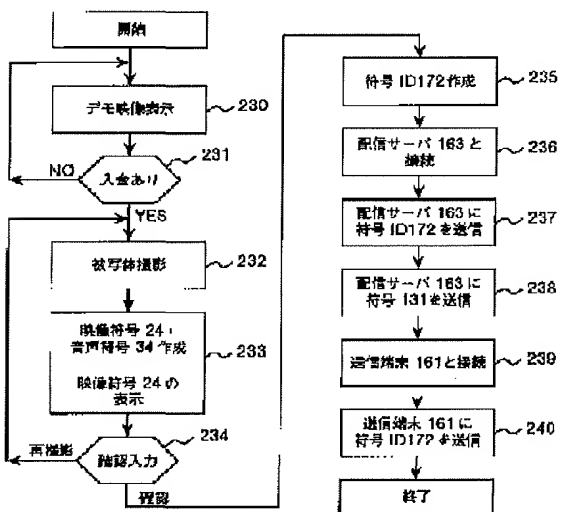
[Drawing 13]

図 13



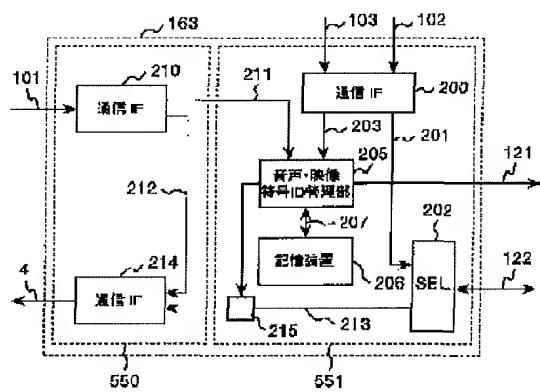
[Drawing 14]

図 14



[Drawing 15]

15



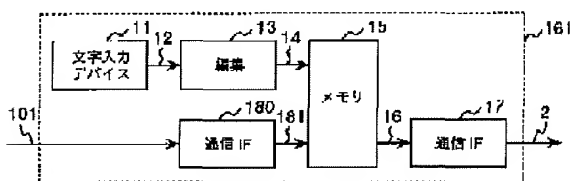
[Drawing 16]

16

	600	601	602	603
	符号ID	可访问回数	符号保存位置	保存期限
605	0	5	1000	00/6/20
606	1	3	2000	00/9/20
607	2	1	5000	00/4/1
608	3	0	8000	00/5/10

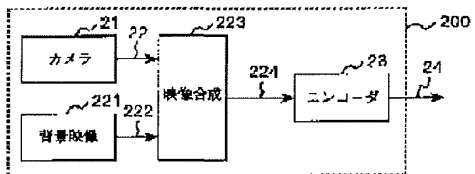
[Drawing 17]

图 17



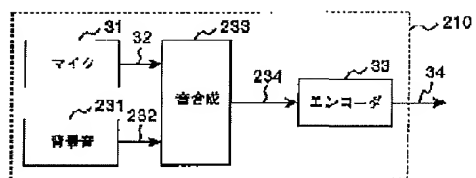
[Drawing 18]

18



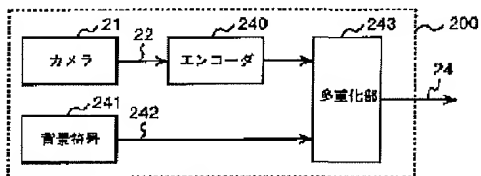
[Drawing 19]

図 19



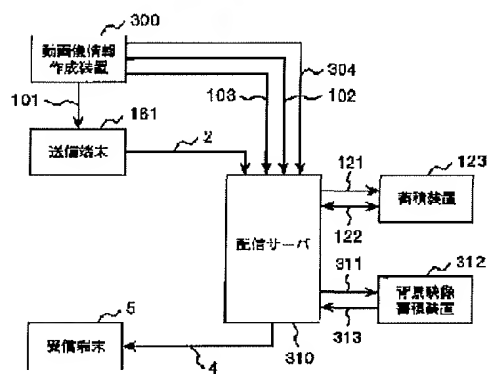
[Drawing 20]

図 20



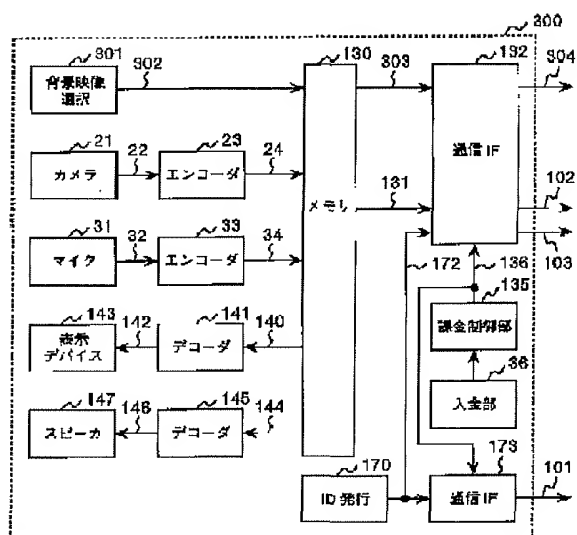
[Drawing 21]

図 21



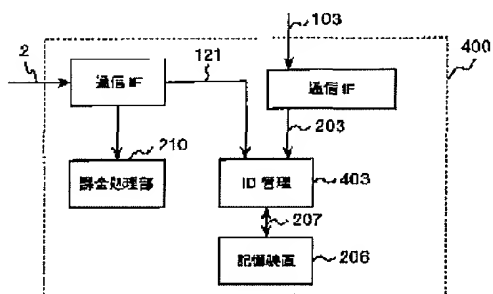
[Drawing 22]

図 2 2



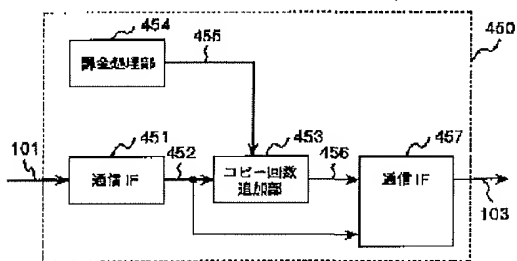
[Drawing 24]

図 2 4



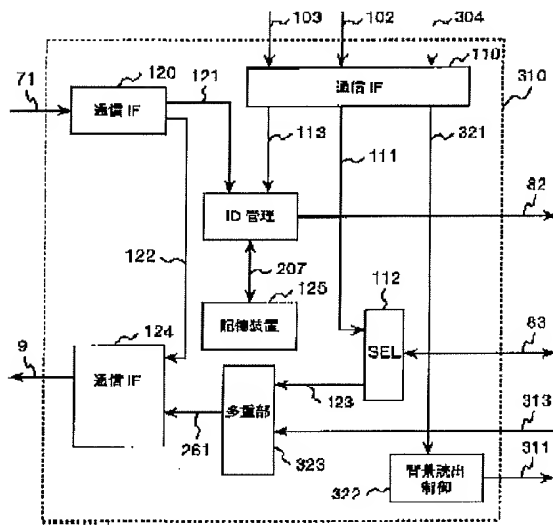
[Drawing 25]

図 2 5



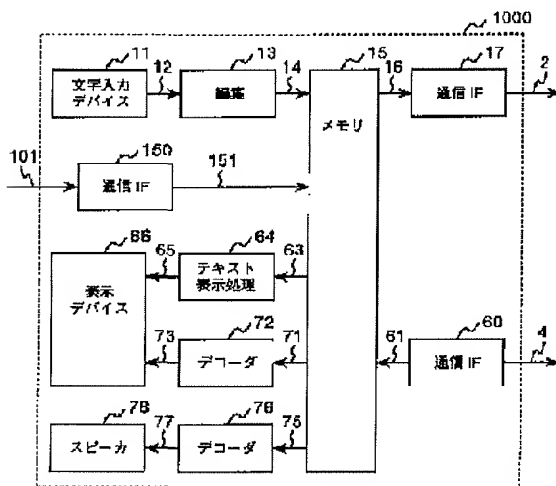
[Drawing 23]

図 2 3



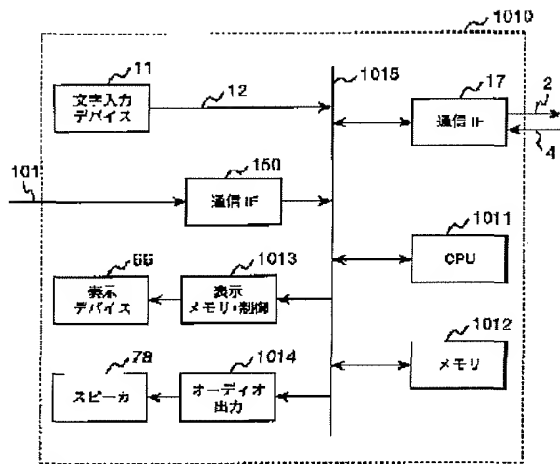
[Drawing 26]

図 2 6



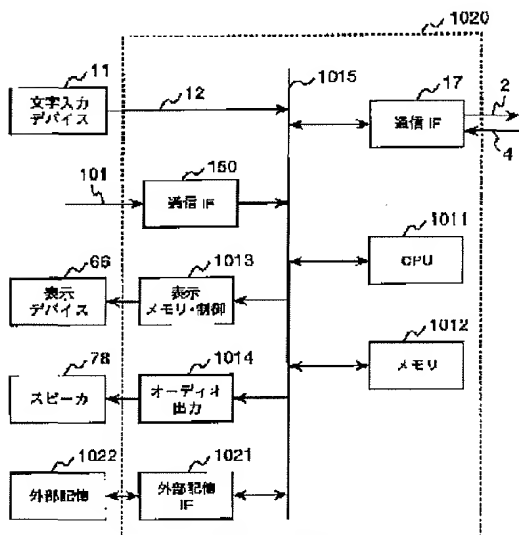
[Drawing 27]

図 27



[Drawing 28]

図 28



[Translation done.]